SECRET

C. Aug 63

CORONA (162) PROGRAM

I. Program Management

II. Configuration Control Board

III. Contractors on the Corona (162) Program

IV. Functions and Responsibilities of Advanced Projects Facility (AP) (SKUNK WORKS)

V. Sunnyvale Operation (LMSC)

VI. Vandenberg Operations

VII. Contracts Handled by [redacted] at SSD 25X1

VIII. Contracts Handled by [redacted] 25X1
at Headquarters

25X1

[redacted]

NRO review(s) completed.

CY - 1 DDS+D
CY 2 ADOSA
CY 3 D/TOSA

SECRET

SECRET

25X1

CORONA (162) PROGRAM

I. Program Management

A. The management of the payload (cameras, recovery vehicle, and associate hardware) is separate, (and handled differently) from management of the vehicle system. The dividing line here is drawn at the physical interface between the forward payload section and the Agena D forward rack. All equipments aft of the interface are considered "vehicle" and administered under the SSD "white" program; all equipments forward are considered "payload" and administered under the "black" program. The interface between these two phases is controlled directly through SSD office and also by interchange between the white and black sides of the LMSC organization. There is no formal exchange of requirements, etc. Currently, there are some problems emerging because of the relative informality of requirements interchange.

B. 1) The "white" program is administered as an Air Force contract directly by SSD in the Program 162 office (Col. Worthington). Aerospace is providing some support; however, Col. Battle generally ran the shop without Aerospace assistance. Under the white program, SSD/Program 162 office administers auxilary payloads, vehicle vulnerability, command and control systems, guidance requirements, etc.

25X1

[redacted]

C. The black program is administered by SSD as executive agent for Program B. The Configuration Control Board exerts control over operational changes in the payload.

II. The Configuration Control Board

A. Configuration Control Boards (CCB's) are set up on the ARGON program, CORONA/MURAL program, CORONA/LANYARD program, and the Eastman Kodak (EK) Research program. The organization and membership of the boards are somewhat different. The discussion below will be primarily with respect to the CORONA/MURAL CCB; the ARGON CCB will be lightly discussed; the defunct LANYARD CCB was similar to

CORONA/MURAL; and the EK CCB will not be discussed. Other NRO programs do not have any equivalent organization; at least CIA is not represented directly.

B. Responsibility of CCB

The CCB is charged with technical approval of any changes in the operational configuration of the payload system (this does not extend to the vehicle system; e.g. orbital timer, guidance system, propulsion, [redacted] 25X1

25X1 [redacted] The CCB is, in effect, supposed to assure that the needs of the intelligence community are met. Where possible, the changes are to be discussed and signed off at the monthly SETD meetings; where urgency does not permit this, TWX communications are permitted. Under some circumstances (emergency, flight abort, etc.) the chairman of the CCB is authorized to make the changes. Non-operational changes (e.g., wire rerouting) do not come under the control of the CCB.

C. Organization of the CCB

1. As a representative board of the government, the CORONA CCB has the following membership:

a. Capt. A. W. Johnson, representing the Program 162 office (Col. Worthington, formerly Col. Battle) of SSD/SAFSP. Capt. Johnson is chairman of the CCB.

b. Lt. Col. H. Howard, representing the NRO Staff..

25X1

c. [redacted] representing the office of D/TECH/OSA/DD/S&T/CIA.

d. [redacted] is present in somewhat of a dual capacity: First, as a local delegate of D/TECH/OSA/DD/S&T; second, as the local operations officer. 25X1

2. At present, there are no alternates designated for any of these members. The ARGON CCB is chaired by Col. Ruzek of SSD, who replaces Capt. Johnson on the CCB.

D. Technical Support

The Systems Engineering (SE) organization at LMSC provides, among other services, technical support for the CCB, in the drafting of proposed Technical Directives (TD's) assembling justifications, coordinating costs, schedules, etc., with associate contractors, and doing necessary paper work in implementing approved TD's.

E. General Functioning of the CCB

Being a committee, the CCB is only as effective as the communications and rapport between its members. With the current deterioration of relations between CIA, NRO, and SAFSP, the effectiveness of this committee action can be questioned. Inasmuch as the SE support is effectively controlled by SSD/SAFSP, and, with the close tie between SE and LMSC/AP, differences of opinion generally are not surfaced to the CCB; frequently the CCB functions as a rubber stamp.

As initially set up, CIA was primarily responsible for injecting the needs of the community, particularly NPIC into the Board; NRO for general coordination; and SSD for

flight impacts. Presently, as can be demonstrated, SSD considers themselves the ultimate authority on all phases of the program.

III. Contractors on the CORONA (162) PROGRAM.

A. White Program - The vehicle system, including the Agena D [redacted] are contracted by LMSC through Air Force channels. Douglas is an associate contractor supplying the THOR and Thrust Augmented THOR. Contractual relations between LMSC and suppliers of subsystems are not well understood here; we believe that all, except possibly the Bell Engine, are on subcontract basis. LMSC also provides launch support.

25X1
NRO

Until recently, the LMSC Agena D organization supplied a Standard Agena D to Program 162; program peculiars were added by the 162 Program. Currently, the program peculiars are being installed by the Agena D group during manufacture of the vehicle. The peculiars include specific control system , required cabling, orbital teimer, etc.

B. Black Program -

1. LMSC provides systems engineering support to the government on an SE contract.

2. ITEK (cameras), LMSC (structure) and GE (recover system) are associate contractors, under the aegis of CCB.

3. EK is an associate (separate) providing film and processing as required.

4. These contracts are all Agency contracts.

IV. Functions and Responsibilities of Advanced Projects Facility (AP) (SKUNK WORKS)

A. General

1. The AP Facility has several roles. The SE organization has systems engineering responsibility for the "black" portion of the 162 Program. AP/LMSC has responsibility for Space Structure design, manufacture and test, systems integration, and systems test. Associate contractor groups (ITEK and GE) have responsibility for checkout of their particular equipments. The Agency staff consists of Col. C. Murphy, CORONA operations officer, Lt. Col. V. Webb, representing D/TECH/OSA, and [redacted] responsible for Project security. The total LMSC organization at AP is under the direction of [redacted] 25X1 25X1 [redacted] assisting. 25X1

B. SE Functions and Responsibilities

1. The SE organization at the AP Facility (composed of Lockheed Personnel) is under the nominal direction of [redacted] (actual working direction of [redacted]. 25X1 25X1 SE has responsibility for providing engineering support to the government, regarding the payload system. As such, SE has no formal directing authority, but only recommends to the government any changes and modifications of the system (forward of the payload interface). These recommendations are forwarded

regarding the three associate program contractors: LMSC, ITEK, and GE. While EK is an associate supplying film and processing, it does not come under the purview of SE. EK is responsible to CIA Headquarters.

2. Directives from the SE organization are implemented only after unananimous approval by the Configuration Control Board (CCB) composed of a representative from the SSD Program 162 office (currently Capt. A. W. Johnson representing Col. Worthington, Col. Battle's replacement), one from NRO Staff (Lt. Col. H. Howard), one from OSA/CIA Washington office [redacted] and one from the OSA/CIA AP office (Col. C. Murphy). This board is chaired by Capt. Johnson. As chairman and representative of Col. Worthington, Capt. Johnson has authority to make emergency decisions as needed.

3. While secure channels of communication [redacted] are available, it should be realized that all traffic originating at [redacted] ostensibly coming from SE, has in fact, been closely coordinated with Capt. Johnson prior to release; this coordination usually extends to telephonic verification of exact wording of messages.

4. SE recognizes SSD as the executive agent for the SE contract. Formerly, at the direction of Dr. Charyk, the contract was written and handled by the Air Force; hence SSD chairmanship. Currently, it is Agency contract.

25X1

5. As orginally set up under Dr. Charyk's direction, SE was to be an independent group within the total LMSC organization -- analogous to the position of a QA department in any industrial organization. However, currently it is under the direct and effective control of the LMSC Program 162 office and the manager of the AP facility [redacted] 25X1

6. In addition to the Technical Directive (TD) activity, SE performs studies and analyses as directed by SSD, coordinates system requirements with LMSC Sunnyvale vehicle systems groups under [redacted] 25X1

25X1 [redacted] and participates in the evaluations of the product.

7. SE, in conjunction with the Flight Support Section of the LMSC effort, assists the operations officer, Colonel Murphy, as requested in providing planning factors and coordinates the post-flight data interchange with the using agencies through NPIC. A close working arrangement exists between

[redacted] 25X1

8. The attached statement of work (SP 2-239) is essentially the contractual committment and scope of SE activity.

9. The attach Flow diagram shows the steps for implementing a proposed technical directive.

C. AP/LMSC Functions and Responsibilities

1. The LMSC organization at the AP Facility is

25X1

under the general direction of [redacted] 25X1

25X1 [redacted] This organization has responsibility for design, manufacture, assembly, and test of the structures and equipment forward of the "payload vehicle interface", except for the cameras and recovery system. In order to perform this function, [redacted] has four departments 25X1 reporting directly to him: (1) Requirements and Analysis (Engineering and Flight Support), (2) General Services (Manufacturing and Test), (3) Planning and Control (Q.A., security, budgets), and (4) Systems Integration. A plans and schedules office, a project office and an advanced plans group function in a staff capacity to the AP manager.

25X1 [redacted] as AP Manager, also has responsibility for the SE group. The AP departments (including SE) work on all projects on a parallel basis.

2. Requirements and Analysis

Requirements and Analysis department (R&A) provides structural and electrical design efforts for the LMSC portion of the program. The group is responsible for integrity of the mechanical and electrical interfaces with the vehicle system and with the associate contractors. Because of the mixed history of the status of GE in the program (i.e., sub-contractor and associate contractor), the engineering group has some responsibility for certain modifications of the GE provided recovery system. Test requirements are established by this group. The Flight Support section provides preflight information to the

operations officer (CIA), assists in the in-flight control, provides telemetry analysis, and provides post-flight data to the processor and users.

The head of R&A is [redacted] one of the original engineers on the CORONA program.

3. General Services

The General Services Department, headed by [redacted] is responsible for manufacture or procurement and modification and testing of LMSC provided hardware. Testing of the total payload system is provided by the deaprtment, with associate contractor personnel participating in the test efforts. Upon completion of the final systems test at AP, the payload is delivered to the Vandenberg operation for final check and launch preparations (film loading, pyrotechnic loading, pad check-out, etc.). Systems Test personnel monitor the final activities at the launch base, but primary responsibility lies with base personnel. The department is responsible for establishing procedures, in accord with engineering requirements.

4. Systems Integration

The Systems Integration department is a recently instituted organization (July 29, 1963) charged with responsibility to insure adequate integration of all systems. It is composed of some of the more capable members of the LMSC/AP and LMSC/SE members, they are also giving the testing programs a thorough evaluation. The department is headed by [redacted] one of the early

CORONA team. The test program evaluation is headed by 25X1 [redacted] in charge of test work on the original program, and one of the most capable test men in AP.

5. Planning and Control

Planning and Controls department, headed by [redacted] 25X1 25X1 [redacted] provides various administrative services. LMSC security, LMSC quality assurance, personnel, budget support, etc., are all under [redacted] direction. 25X1

6. Staff Functions

A. Project Office, under [redacted] has general 25X1 cognizance of the LMSC aspects of the programs. This office has had live control over the engineering, integration, and test services. 25X1 [redacted] general competence in Satellite Reconnaissance Systems is high.

B. Advanced Planning is headed by [redacted] 25X1 photographic engineer of long experience. He is currently working on proposal efforts, assisted by [redacted] 25X1 25X1 (Designer), [redacted] He was earlier manager of the ARGON program, and head of the Project Office, when it directed LMSC engineering effort.

C. Plans and Schedules office is headed by [redacted] 25X1 25X1 [redacted] and has responsibility for overall schedules of the programs handled at AP.

V. Sunnyvale Operation (LMSC)

A. The Military Satellite activities at LMSC (Sunnyvale) are directed by Jim Plummer, original Lockheed manager of the CORONA program. [redacted] now has 25X1

responsibility for the total 162 (CORONA) program. Under his direction, the AGENA-D is procured from LMSC/AGENA-D organization, modified, checked out, and shipped to VAFB.

25X1 [redacted] Assistant Manager, Program 162, generally has responsibility for Sunnyvale Program 162 operations - he

25X1 is thus [redacted] counter part.

B. The white side activities - external control documents, flight planning (white), performance analysis, vehicle requirements, ect., are performed at Sunnyvale.

25X1 [redacted] has prime responsibility, under [redacted] 25X1 for establishment of requirements and systems integration (working closely with AP, translating black into white requirement). Estimates of performance capabilities, system modifications and improvements, orbit planning, etc., are also carried out by [redacted] group, supported 25X1 by other LMSC organizations.

C. Also under [redacted] in NRO 25X1

[redacted] 25X1

[redacted] 25X1

25X1 [redacted] [redacted] 25X1 NRO into the system.

D. Program 162 Engineering provides the coordination between Program 162 peculiar hardware and the general vehicle engineering departments of Satellite systems.

25X1 E. [redacted] Planning and Controls, has general cognizance of schedule and planning activities for Program

[redacted] 25X1

F. Other LMSC Satellite Systems department provide manufacturing, quality control, test, and engineering services to the 162 Program.

G. The Satellite Test Center (STC) is located adjacent to the Sunnyvale LMSC facilities. This is now almost totally an Air Force operated facility.

VI. Vandenberg Operations

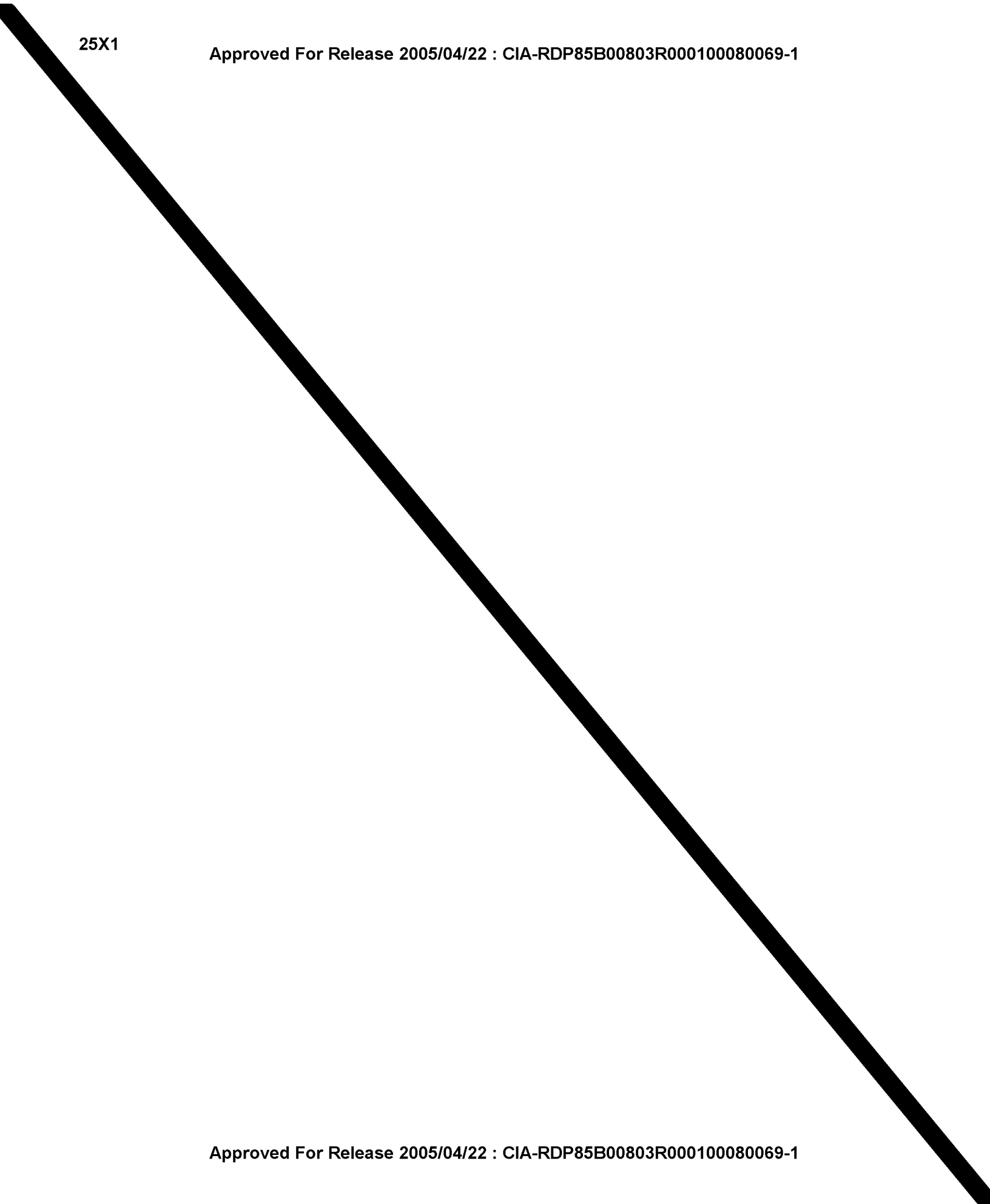
A. The Vandenberg Operation (VAFB) is under a completely separate administrative set-up from the LMSC Program 162 office. The VAFB Operation manager, Ray Gavlak, provides launch activity support to all LMSC programs at VAFB. One group, the SS/L Section (SS/L is and early name for the DISCOVERER, 162, 622, or CORONA) provides base support for the CORONA payload. [redacted] the 25X1 Section Supervisor, has been on the program almost four years, and this section provides all base activities connected with the CORONA payload. Final loading of film is supervised by government representatives (e.g., Lt. Col. Webb, [redacted] and SE representatives. An LMSC General Services engineer stays with the system until flight, to provide necessary coordination with the LMSC AP facility. 25X1

B. Air Force administration of the base activities is separate from the project directions, although program officers have strong inputs at the SS/L facility.

C. Final acceptance by the government of payload etc. hardware occurs at VAFB principally

by SSD (e.g., Capt. Johnson), though [redacted] and Webb frequently participate. 25X1 25X1

D. Payload activities at VAFB include final check-out, vehicle compability checks, installation of flight exposure slit, final thermal control surface painting, preparation of flight program tape, pyrotechnic installation, and film loading.



Approved For Release 2005/04/22 : CIA-RDP85B00803R000100080069-1